Aquifer Exemption Evaluation

Regulatory Agency: Click here to enter text.

Date of Aquifer Exemption Request:

Substantial or Non-Substantial Program Revision: Non-Substantial

Basis for Substantial or Non-Substantial Determination: This AE request is considered non-substantial, consistent with EPA Guidance 34.

Operator: Click here to enter text.

Well Class/Type:

Well/Project Name:

Well/Project Permit/Docket Number:

Well API number:

Field:

Tribal Reservation:

Well/Project Location: Qtr: Section: Township: Range:

Footage Call:

County: **State:**

Latitude: **Longitude:**

DESCRIPTION OF PROPOSED AQUIFER EXEMPTION (depths are approximate values at the well bore)

Aquifer to be Exempted: **Top:** **Bottom:**

Lithology:

Water Quality – TDS (mg/L): **Source of WQ Data:**

Areal Extent and Description of Exempted Aquifer (i.e. radial distance, encompassed TSR)

Total Area of Aquifer to be Exempted:

Description:

Confining Zone(s):

Upper:	**Lithology:**	**Top:**	**Bottom:**
Lower:	**Lithology:**	**Top:**	**Bottom:**

BACKGROUND

USDW(s):

Injectate Characteristics include water source and water quality:

BASIS FOR DECISION

Regulatory Criteria under which the exemption is requested

146.4: ☐ **(a)** Not currently used as a drinking water source and:

- How far from the AE boundary to review drinking water wells and how was this determined?
- Identify drinking water wells in area of review, their depths, and provide source of information.
- Identify any source water assessment and/or protection areas and designated sole source aquifers
- Identify nearest public water supply (PWS).
- What is the distance of the nearest drinking water well utilizing the aquifer proposed for exemption? Is it in close enough proximity to require a capture zone analysis?
- Provide map of AE boundary and location of drinking water wells.
- Regional and local (if available) groundwater flow direction.

☐ **(b)(1)** It is mineral, hydrocarbon, or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or Class III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible; or

- Projections on future use of the proposed aquifer.

Hydrocarbon Production Data:

- Demonstrate historical production having occurred in the project area or field.
- Demonstrate existence hydrocarbon (logs, core data, etc) and estimation of the quantity of the hydrocarbon potential.

☐ **(b)(2)** It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical; or

- Projections on future use of the proposed aquifer.
- Current sources of water supply in the area of the proposed exempted aquifer.
- Availability, quantity and quality of alternative water supply source(s) to meet present and future needs.
- Population trends in the area and analysis of future water supply needs within the general area.
- Well construction and water transportation and/or treatment costs to develop aquifer proposed for exemption compared to costs to develop alternative resource(s).

☐ **(b)(3)** It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or

- Projections on future use of the proposed aquifer.
- Concentrations, types, and source of contaminants in the aquifer.
- If contamination is a result of a release, extent of contaminated area and whether contamination source has been abated.
- Ability of treatment to remove contaminants from ground water.
- Current sources of water supply in the area of the proposed exempted aquifer.
- Availability, quantity and quality of alternative water supply source(s) to meet present and future needs.
- Population trends in the area and analysis of future water supply needs within the general area.
- Well construction and water transportation and/or treatment costs to develop aquifer proposed for exemption compared to costs to develop alternative resource(s).

☐ **(c)** TDS is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

- Projections on future use of the proposed aquifer.
- Include information about the quality and availability of water from the aquifer proposed for exemption.
- Analysis of the potential for public water supply use of the aquifer. This may include: a description of current sources of public water supply in the area, a discussion of the adequacy of current water supply sources to supply future needs, population projections, economy, future technology, and a discussion of other available water supply sources within the area.

Describe what assurance exist to confine fluids vertically and laterally within the AE boundary:

- Discuss injection rate or volume limitation
- Discuss existence and quality of confining zone(s). (Is the confining zone continuous, are there known fractures?)

Public Comment

Public Comment Conducted? ☐ Yes ☐ No

Results of Public Comment Process:

Checklist of Questions to Consider

☐ **Are all wells within the AE boundary and AOR properly cemented to prevent preferential flow paths?**

☐ **Will injection of fluids cause any original formation fluid or injectate to migrate to any known USDW?**

☐ **Proximity to other jurisdictional boundaries?**

☐ **Proximity of aquifer recharge area?**

☐ **Is seismicity a concern in the area?**

☐ **For area exemptions, consider collecting several water samples around the field to characterize water quality in a proposed area request.**

Addditional Questions for Disposal Wells

☐ **Are there deeper aquifers and/or aquifers with poorer water quality that can be used for injection?**

☐ **Where are other disposal wells in the area? Are they utilizing deeper and/or poorer water quality aquifers for disposal?**

☐ **Has the injectioncapacity been reached for aquifers (in cases where multiple formations serve as injection zones) and/or wells in previously permitted disposal wells that may or may not have already received exemptions?**

☐ **Are there plans to submit similar individual aquifer requests? If so how many? What is the projected disposal needs?**

Provide other considerations to support aquifer exemption approval: